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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,487	05/15/2001	Chun Hung Lin	4459-018A	8454

7590

06/14/2002

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EXAMINER

COLLINS, DEVEN M

ART UNIT

PAPER NUMBER

2823

DATE MAILED: 06/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/854,487		LIN, CHUN HUNG	
	Examiner		Art Unit	
	D. M. Collins		2823	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-7 and 11-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-7 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 4-7 and 11-14 are rejected under 35 U.S.C. 102(e) as being unpatentable over Jung et al. (6,342,730, dated 1/29/02).

Jung et al. show the device as claimed in the Figures 1-15 with corresponding text. In re claim 4, Jung et al. disclose a low pin count chip package 200 comprising:

a die pad 232 and a plurality of connection pads arranged at the periphery of the die pad 232 wherein the die pad 232 and the connection pads 230 have a concave profile (col. 5, line 40);
a first metal coating 240 on the upper surface of the die pad 232 and the connection pads 230;
a semiconductor chip 210 disposed on the die pad 232 and electrically coupled to the connection pads 230;

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a package body 200 formed over the semiconductor chip 210 and the connection pads 230 in a manner that a portion of the die pad 232 and a portion of each connection pad 230 extend outward from the bottom of the package body 220; and
a second metal coating 270 on the lower surface of the die pad 232 and the connections pads 230.

In re claim 5, Jung et al. disclose the low pin count chip package 200 from claim 4, wherein each of the first 240 and the second 270 metal coating comprises a layer of nickel 242 covering the surface of the die pad 232 and the connection pads 230, and a layer of metal selected from the group consisted of gold and palladium 250 covering the nickel layer 242.

In re claim 6, Jung et al. disclose the low pin count chip package 200 from claim 4 wherein the extension portions of the die pad 232 and each connection pad have a height of at least 2 mils.

In re claim 7, Jung et al. disclose the low pin count chip package 200 from claim 4 wherein areas on the surfaces of the die pad 232 and each connection pad 230 without protection of the package body 220 have a third metal coating formed thereon thereby avoiding corrosion and contamination. (col. 5, line 5)

In re claim 11, Jung et al. disclose a low pin count chip package 200 comprising:
a semiconductor chip 210;
a plurality of connection pads 230 arranged at the periphery of the semiconductor chip 210 wherein the connection pads 230 have a concave profile (col. 5, line 40);
a first metal coating 240 on the upper surface of the connection pads 230;

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the semiconductor chip 210 having a plurality of bonding pads 210a electrically coupled to the connection pads 230;

a package body 220 formed over the semiconductor chip 210 and the connection pads 230 in a manner that a portion of each connection pad 230 extends outward from the bottom of the package body 220; and

a second metal coating 270 on the lower surface of the connection pads 230;

In re claim 12, Jung et al. disclose the low pin count chip package 200 from claim 11 wherein each of the first 240 and the second 270 metal coating comprises a layer of nickel 242 covering the surface of the connection pads 230, and a layer of metal selected from the group consisted of gold and palladium 250 covering the nickel layer 242.

In re claim 13, Jung et al. disclose the low pin count chip package 200 from claim 11 wherein the extension portion of each connection pad 230 has a height of at least 2 mils.

In re claim 14, Jung et al. disclose the low pin count chip package 200 from claim 11 wherein areas on the surface of each connection pad 230 without protection of the package body 220 have a third metal coating formed thereon thereby avoiding corrosion and contamination.

(col. 5, line 5)

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Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Deven M. Collins whose telephone number is (703) 305-7840.

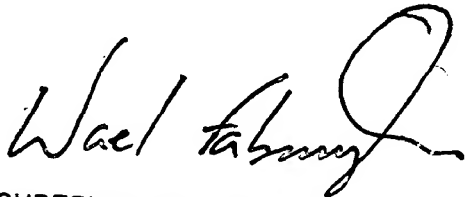
The examiner can normally be reached on Monday-Friday from 6:30 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy, can be reached on (703) 308-4918. The fax phone number for this Group is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

DMC

May 10, 2002


SUPERVISORY PRIMARY EXAMINER
TECHNOLOGY CENTER 2000